



Sheltering In Place During a Radiation Emergency

Information for the Public

With recent terrorist events, many people have wondered about the possibility of a terrorist attack involving radioactive materials. People who live near but not in the immediate area of the attack may be asked to stay home and take shelter rather than try to evacuate. This action is called “sheltering in place.” Because many radioactive materials rapidly decay and dissipate, staying in your home may protect you from exposure to radiation. The thick walls of your home may block much of the harmful radiation. Taking a few simple precautions can help you reduce your exposure to radiation. The Michigan Department of Community Health has prepared this fact sheet to help you protect yourself and your family and to help you prepare a safe and well-stocked shelter.

Preparing a Shelter in Your Home

The safest place in your home during an emergency involving radioactive materials is a centrally located room or basement. This area should have as few windows as possible. The further your shelter is from windows, the safer you will be.

Preparation is the key. Store emergency supplies in this area. An emergency could happen at any time, so it is best to stock supplies in advance and have everything that you need stored in the shelter.

Every six months, check the supplies in your shelter. Replace any expired medications, food, or batteries. Also, replace the water in your shelter every six months to keep it fresh.

Make sure that all family members know where the shelter is and what it is for. Caution them not to take any items from that area. If someone borrows items from your shelter, you may find that important items are missing when they are most needed.

If you have pets, prepare a place for them to relieve themselves in the shelter. Pets should not go outside during a radiation emergency because they may track radioactive materials from fallout into the shelter. Preparing a place for pets will keep the radioactive materials from getting inside the shelter.

Preparing Emergency Supplies

Stock up on supplies, just as you would in case of severe weather conditions or other emergencies. Following is a list of things to consider when preparing your emergency kit.

- **Food with a long shelf life** – Examples of this include canned, dried, and packaged food products. Store enough food for each member of the household for at least 3 days.
- **Water** – In preparation for an emergency, purchase and store bottled water or simply store water from the tap. Each person in the household will need about 1 gallon per day; plan on storing enough water for at least 3 days.
- **A change of clothes and shoes** – Check clothing every 6 months and remove clothes that no longer fit or are unsuitable for seasonal weather. Remember to include underwear, socks, sturdy shoes or work boots, and winter or summer clothes as needed.
- **Paper plates, paper towels, and plastic utensils** – Store disposable dishware and utensils because you will not have enough water to wash dishes and because community water sources may be contaminated.
- **Plastic bags** – Because you may not be able to leave your shelter for several days, you will need to collect your waste in plastic bags until it can be removed.
- **Bedding** – Store sheets, blankets, towels, and cots for use during the time that you cannot leave your shelter.
- **Battery-operated radio and batteries** – Electrical power may not be on for several days. A battery-operated radio will allow you to listen to emergency messages.
- **Medicines** – Have 2-3 days' dose of your current prescription medicines in a childproof bottle for your shelter medical kit; label with the name and expiration date of the medicine. (Discuss with your doctor the best way to obtain this small amount of extra medicine.) Be sure to check medicines in your kit every 6 months to make sure they are not past the expiration date.
- **Toiletries** – Keep a supply of soap, hand sanitizer, toilet paper, deodorant, disinfectants, etc.
- **Flashlight and batteries** – Electrical power may be out for several days. A flashlight will help you see in your shelter.
- **A telephone or cell phone** – Although cell phone or ground phone service may be interrupted, there is still a chance that you will be able to use a phone to call outside for information and advice from emergency services.
- **Extra eyeglasses or contact lenses and cleaning supplies.**
- **Duct tape and heavy plastic sheeting** – You can use these items to seal the door to your shelter and to seal any vents that open into your shelter for a short period of time if a radiation plume is passing over. Suffocation could occur if you keep the shelter tightly sealed for more than a few hours.
- **Pet food, baby formula, diapers, etc.** – Don't forget the other members of your family. If you have an infant, store extra formula and diapers. If you have pets keep a 3-day supply of pet food.

- **First aid kit** – You can purchase a first-aid kit or prepare one yourself. Be sure to include the following items:

<ul style="list-style-type: none">• Sterile adhesive bandages• Sterile gauze pads in 2 inch and 4 inch sizes• Adhesive tape• Sterile rolled bandages• Scissors• Tweezers• Needle• Thermometer• Moistened towelettes• Antiseptic ointment• Tube of petroleum jelly or other lubricant	<ul style="list-style-type: none">• Soap or hand sanitizer• Latex or vinyl gloves• Safety pins• Aspirin or aspirin free pain reliever• Antidiarrhea medication• Laxatives• Antacids for stomach upset• Syrup of ipecac to cause vomiting if advised by the Poison Control Center• Activated charcoal to stop vomiting if advised by the Poison Control Center
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- **Games, books and other entertainment** – Because you may be in your shelter for several days, keep items on hand to occupy your family during that time. Children are likely to get bored if they have to stay in one place for long periods. Think of activities that they will enjoy doing while in the shelter – finger painting, coloring, playing games, etc.

Tips Before Entering a Shelter

If you are outside when the alert is given, try to remove clothing and shoes and place them in a plastic bag before entering the house. During severe weather, such as extreme cold, remove at least the outer layer of clothes before entering the home to avoid bringing radioactive material into your shelter. Leave clothing and shoes outside. Shower and wash your body with soap and water. Removing clothing will eliminate 90% of radioactive contamination. By taking this simple step, you will reduce the time that you are exposed and also your risk of injury from the radiation.

Before entering the shelter, turn off fans, air conditioners, and forced-air heating units that bring air in from the outside. Close and lock all windows and doors, and close fireplace dampers.

When you move to your shelter, use duct tape and plastic sheeting to seal any doors, windows, or vents for a short period of time in case a radiation plume is passing over (listen to your radio for instructions). Within a few hours, you should remove the plastic and duct tape and ventilate the room. Suffocation could occur if you keep the shelter tightly sealed for more than a few hours.

Keep your radio tuned to an Emergency Alert System station at all times. Listen for official directions and information, which will be repeated often. Officials will provide information about when you may leave your shelter and whether you need to take other emergency measures.

Should I Take Potassium Iodide During a Radiation Emergency?

- Potassium iodide (KI) should only be taken in a radiation emergency that involves the release of radioactive iodine, such as an accident at a nuclear power plant or the explosion of a nuclear bomb. A “dirty bomb” most likely will not contain radioactive iodine.
- A person who is internally exposed to radioactive iodine may experience thyroid disease later in life. The thyroid gland will absorb radioactive iodine and may develop cancer or abnormal growths later on. KI will saturate the thyroid gland with iodine, decreasing the amount of harmful radioactive iodine that can be absorbed.
- KI only protects the thyroid gland and does not provide protection from any other radiation exposure.
- Some people are allergic to iodine and should not take KI. Check with your doctor about any concerns you have about potassium iodide.
- If KI is recommended after exposure Local Health Officials will notify residents on how to obtain it.

For more information about KI, visit the following websites:

- <http://www.bt.cdc.gov/radiation/ki.asp>
- http://www.fda.gov/cder/drugprepare/KI_Q&A.htm
- <http://www.fda.gov/cder/guidance/4825fnl.htm>

Where can I get more information on sheltering in place and radiation emergencies?

- Contact your local public health department. Check <http://www.malpb.org/page.cfm/108/> for your jurisdiction. A list of local public health departments is also available at http://www.michigan.gov/documents/June2003LHDLList_69658_7.pdf
- Visit the Michigan Department of Environmental Quality at: http://www.michigan.gov/deq/0,1607,7-135-3312_4120_4243---,00.html
- Visit The Centers for Disease Control and Prevention (CDC) website, <http://www.bt.cdc.gov/radiation/index.asp>.
- Call the Centers for Disease Control and Prevention Public Response Service Hotline:
English: 1-888-246-2675
Español: 1-888-246-2857
TTY: 1-866-874-2646